

100th Meeting of the LHC Collimation Working Group, March 16nd, 2009

Present: Oliver Aberle, Ralph Assmann (chairman), Giulia Bellodi, Alessandro Bertarelli, Chiara Bracco, Luca Bruno, Francesco Cerutti, Alessandro Dallocchio, Alexej Grudiev, Barbara Eva Holzer, Stefano Redaelli (scientific secretary), Stefan Roesler, Adriana Rossi, George Smirnov, Heins Vincke, Jörg Wenninger.

Comments to the minutes

No comments to the previous minutes.

Follow-up of open actions:

- The FLUKA studies discussed on the previous meeting of March 2nd are on-going. F. Cerutti will present the simulation results next week, at the meeting of Monday 23rd.
- G. Bellodi has proposed a few additional locations in IP3 for the installation of the temperature sensors by the TE-VSC team for the ion operation in IR3. These locations correspond to locations of loss peaks predicted by simulations. The positions will be transmitted to the TE-VSC team. The layout of IP7 remains unchanged.

Agenda of this meeting

Meeting dedicated to dry-runs of what will be presented at the April review:

- Overview of the Phase II solutions (R. Assmann)
- Integration of a Hollow Electron Lens Scraper into the LHC Collimation System (J. Smith)

The next meeting will be March 23rd, 2009.

Provisional agenda (<http://lhc-collimation.web.cern.ch/lhc-collimation/>):

Meeting devoted to dry-runs of the review presentations:

- A. Bertarelli: Status of Phase II hardware at CERN
- T. Markiewicz: Status of Phase II hardware at SLAC
- F. Cerutti: Update of Phase II FLUKA simulations

Minutes of the meeting

1 Overview of Phase II solutions (R. Assmann)

R. Assmann presented a draft version of his introductory presentation at the Phase II review. The final version will be posted on the web. The slides presented at this meeting are available upon request. The comments discussed in this meeting will be incorporated in the final version.

2 Integration of a Hollow Electron Lens Scraper into the LHC Collimation System (J. Smith)

J. Smith presented the results of his `SixTrack` simulations on the possible usage of a hollow electron lens into the LHC. R. Assmann said that probably V. Shiltsev will not be able to participate to the Phase II review and J. Smith has agreed to give a presentation on the electron lens also on his behalf.

As a comment to J. Smith's presentation, R. Assmann commented that for the review some introductory transparencies on the usage of the e-lens at the Tevatron should also be added. In addition, he suggested to focus on the usage of this device as a beam scraper rather than as an auxiliary tool to improve the cleaning efficiency of the collimation system. He also suggested that the plots presented should be converted in the standard units of inefficiency used at CERN in order to have an homogeneous definition.

T. Markiewicz commented that the conclusion that the simulations are enough for the approval of the installation of this device in the LHC seems too strong and might be softened. Other aspects need to be addressed in more detail. For example, the strength of the field inside the hollow electron beam.

J. Wenninger suggested to envisage the possibility of testing the e-lens in the Tevatron rather than to install it directly on the LHC. R. Assmann agreed. On the other hand, clearly this would have important implications for the Tevatron (they do not have an hollow electron beam) and it is not obvious to set-up such an experiment.

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